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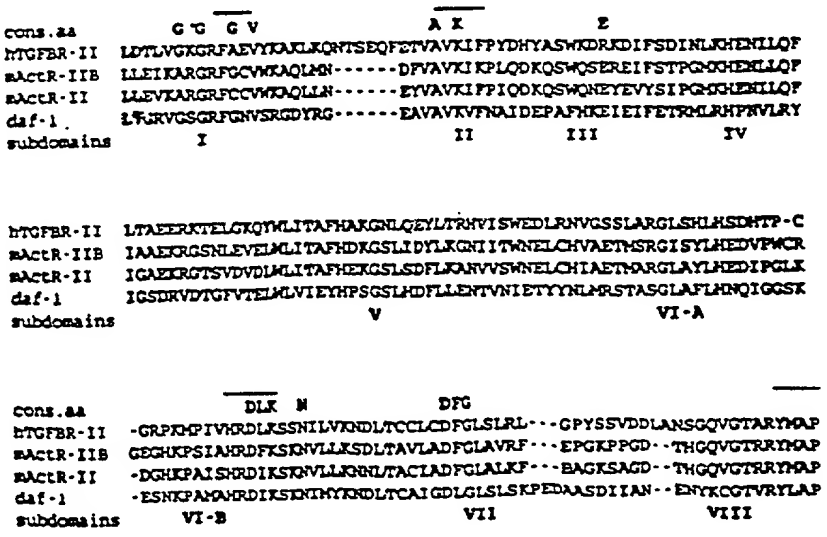

(57) Abstract

A new receptor family has been identified, of activin-like kinases. Novel proteins have activin/TGF-β-type I receptor functionality, and have consequential diagnostic/therapeutic utility. They may have a serine/threonine kinase domain, a DFKSRN or DLKSKN sequence in subdomain VIB and/or a GTKRYM sequence in subdomain VIII.